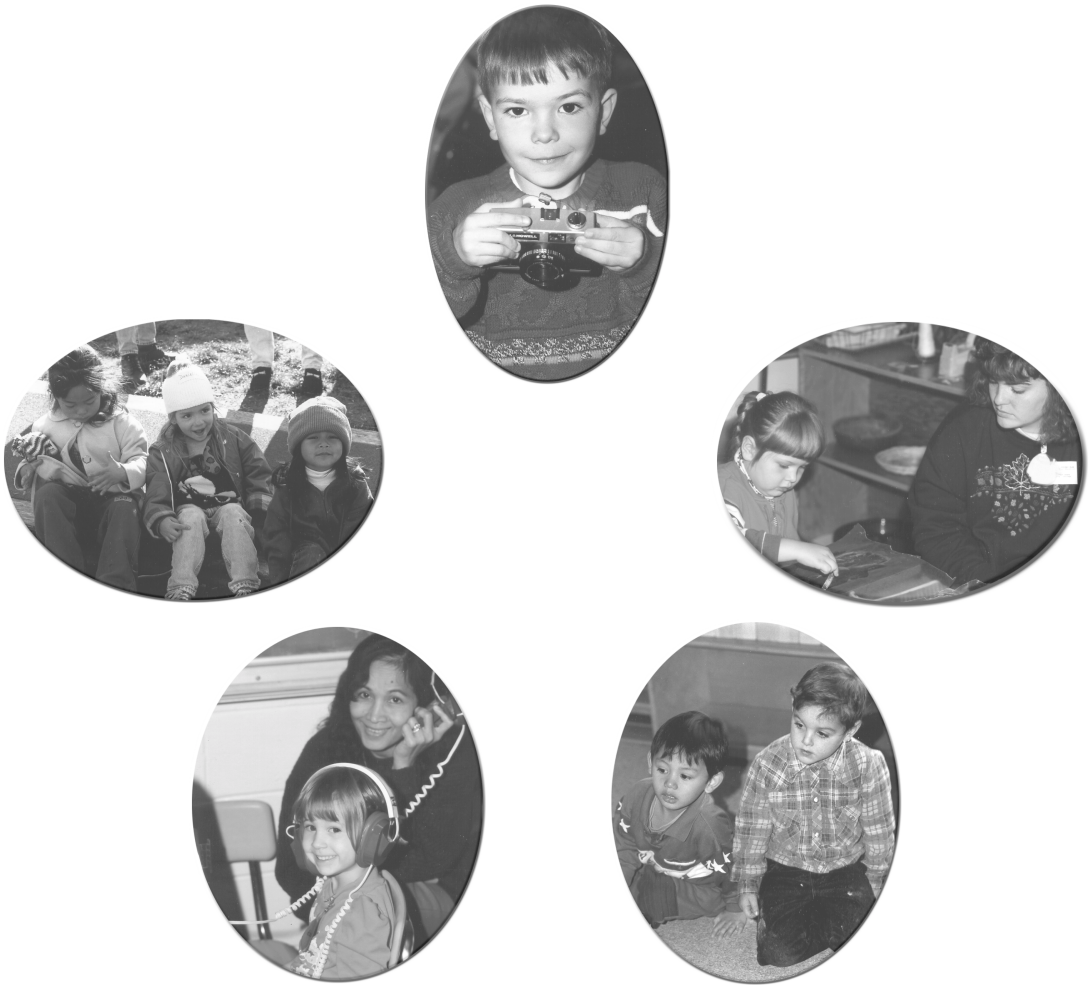
WASHINGTON STATE'S

EARLY CHILDHOOD EDUCATION AND ASSISTANCE PROGRAM

An Investment in Children and Families

YEAR 8 LONGITUDINAL STUDY REPORT



WASHINGTON STATE COMMUNITY, TRADE AND ECONOMIC DEVELOPMENT

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Building Foundations for the Future

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Credits

The Early Childhood Education and Assistance Program (ECEAP) Longitudinal Study is a community effort. Thirty-two local ECEAP contractors and their staff and hundreds of elementary school administrators, teachers, and support staff collected data on children and families participating in the study. The parents themselves provided invaluable information about the effects of ECEAP services on their children and families. The data collection process required an immense but crucial effort by all who participated, and their assistance is very much appreciated.

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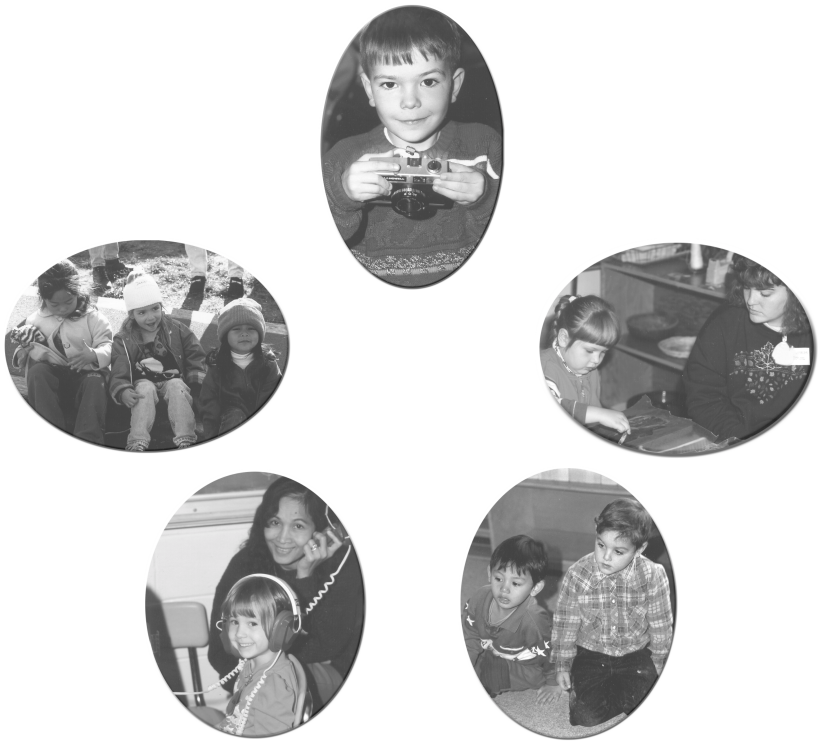
TABLE OF CONTENTS

TABLE OF FIGURES



YEAR 8 (1995-96) ECEAP LONGITUDINAL STUDY REPORT
EXECUTIVE SUMMARY

Background

Washington State's Early Childhood Education and Assistance Program (ECEAP) is a community-based, family-centered, comprehensive pre-kindergarten program for low-income three- and four-year-olds and their families. Since 1988, a quasi-experimental Longitudinal Study of ECEAP has been conducted to measure outcomes of the enrolled children and their families. All Study participants were four years old when they received ECEAP services. A carefully-constructed Comparison group of ECEAP-eligible children and families that did not receive ECEAP services is included in the Study as well. The primary purpose of the Study is to determine ECEAP's effectiveness in preparing economically disadvantaged three- and four-year-olds to achieve success in their elementary schooling and beyond. This report on the eighth year of the Study (1995-96) focuses on characteristics and outcomes of those ECEAP Longitudinal Study participants who have received public assistance as an income source.

Findings

Among the findings in this report, the most notable shifts experienced by participants from Study enrollment to Year 8 were the decrease in public assistance as an income source and the increase of wages. At enrollment, 95 percent of ECEAP children lived at or below the poverty level, compared to 53 percent of the Comparison group children. By Year 8, only 53 percent of those ECEAP children remained at or below poverty level; a 42 percent shift. Comparison group children had only shifted 14 percent, with 39 percent still living at or below poverty level. Of those Study participants at or below poverty level, 15 percent of ECEAP families reported more than one source of income at enrollment, and by Year 8 that number had grown to 45 percent. In contrast, 29 percent of Comparison group families had multiple sources of income at enrollment, increasing to 40 percent at Year 8. For both groups, 17 percent more Study participants reported wages as an income source at Year 8 than at enrollment, and 14 percent fewer reported public assistance as a source of income. Interestingly, Child Support as an income source increased from 6 percent at enrollment to 15 percent by Year 8.

For those Study participants receiving public assistance as an income source, there was a 34 percent increase from enrollment to Year 8 in the receipt of other sources of income. Child Support receipt increased from 3 percent at enrollment to 24 percent by Year 8. Unemployment Compensation dropped from 13 percent at enrollment to 2 percent by Year 8. There was a 19 percent decrease in children living with their mother only, while the number living with their mother and a stepfather increased over 7 percent. Children living with single fathers increased from 2 percent to 6 percent, and with grandparents or other relatives increased from 3 percent to 5 percent.

As a comprehensive program, ECEAP is concerned with the health and well-being of children and families. Related findings show that 59 percent of children in families who receive public assistance received a physical exam from a doctor, compared to 49 percent of children in families not receiving public assistance. However, only 19 percent of children in families receiving public assistance that accessed dental services received fillings, compared to 25 percent of children in families not receiving public assitance that accessed dental services. Also, families receiving public assistance reported housing problems at a more frequent, statistically significant rate than families not receiving public assistance. Additionally, parents of families receiving public assistance had lower positive mean scores and higher negative mean scores on a Self-Report of Personal Well-Being.

On various measures of educational progress, there was a statistically significant relationship found with receipt of public assistance. Those children who lived in families not receiving public assistance had higher mean scores on parent-reported adjustment to school than those children in families who did receive public assistance. Similarly, children of families not receiving public assistance had higher teacher assessment scale scores for mid-year progress and academic progress than children in families who received public assistance. Finally, children in families who received public assistance had a higher than expected number of school changes.

The ECEAP Longitudinal Study will continue to follow the children and families through high school graduation or the equivalent. Reported findings are found in greater detail in the body of the Year 8 Report.

WASHINGTON STATE'S

EARLY CHILDHOOD EDUCATION AND ASSISTANCE PROGRAM

CHAPTER 1

A PROFILE OF ECEAP LONGITUDINAL STUDY PARTICIPANTS RECEIVING PUBLIC ASSISTANCE

Background

The State of Washington has been operating a statewide system of comprehensive early childhood education and assistance services for over 14 years. The Early Childhood Education and Assistance Program (ECEAP) was authorized by the Early Childhood Assistance Act of 1985. ECEAP is a community-based, family-centered, comprehensive prekindergarten program for low-income three- and four-year-olds and their families. The program provides an opportunity for strengthening children's cognitive, social, and emotional skills in order to enhance future educational success.

Since 1985, ECEAP has continued to grow and expand. The number of children served annually by ECEAP has increased from 1,000 in 1986 to nearly 8,140 during the 1998-1999 program year. ECEAP has served almost 75,000 children and families since its inception. Currently, ECEAP has 35 contractors operating over 260 program sites across the state.

The Context of Poverty

The United States has been experiencing major demographic shifts in recent years (Jensen, 1993). As the findings from the ECEAP Longitudinal Study are reviewed, the prospects for the well-being of the children and families in this Study and all children and families in Washington should be considered in light of social, political, and philosophical changes, as well as economic changes, resultant from these shifts. One demographic shift that has critical implications for outcomes of children and families in the ECEAP Longitudinal Study is the increase in the poverty rate. The poverty rate of children has increased dramatically in the past fifteen years and is now higher than any other age group, at well over double the rate for adults or the elderly in 1994 (National Center for Children in Poverty, 1996). Between 1979 and 1994, the number of children under age six living in poverty in the United States grew from 3.5 million to 6.1 million (National Center for Children in Poverty, 1996). In spite of programs and initiatives designed to combat child poverty, children living in the United States still experience the effects of poverty more often than do children in other countries with similar living standards (Bureau of the Census, 1990a).

The economic status of many of the families in the ECEAP Longitudinal Study could be described as dire. Half (50 percent) of the entire Year 8 ECEAP Longitudinal Study children and families (this includes both ECEAP group and Comparison group participants) lived in poverty during 1995-1996. Fifty-three percent (N = 428) of the ECEAP and 39 percent (N = 75) of the Comparison children and families lived in poverty during Year 8. The median annual income for the entire Year 8 ECEAP Longitudinal Study was $20,000 and supported an average of almost five people.

Poverty can have a profound effect, both directly and indirectly, on how children fare within societal institutions and structures (Hamburg, 1985; Katz, 1990). Whether it is because poverty produces a stigma on those in this life circumstance, or because of fewer opportunities for cognitive and social development in the early years, or a combination of both, poverty affects child and family outcomes (Zill, Moor, Smith, Stief, and Coiro, 1991; Duncan, Brooks-Gunn, and Klebanov, 1994; Entwisle, 1995). Issues regarding poverty and its effects must be addressed before society can expect relatively short-term social and educational programs to change the life-course of its participants. The report of the Year 8 ECEAP Longitudinal Study findings must be considered in light of the economic circumstance of the target population. The target population for ECEAP is defined as low-income and a family must be at or below poverty level at the time of ECEAP enrollment (110 percent of the Federal Poverty Level as of the 1999-2000 program year). Fifty percent of the Study children and families are at or below poverty level at Year 8. ECEAP also targets services to children at risk of school failure for developmental or environmental reasons, and enrolls up to 10 percent of the total program capacity with children at risk because of neglect, abuse, or disabling conditions, regardless of family income. Furthermore, one of every ten ECEAP enrollment slots is targeted to Native American children and children of migrant and seasonal farm workers. The economic condition of the families in the Study is adverse upon program entry and continues to be adverse almost ten years later. Poverty impacts the life circumstance across generations and programs such as ECEAP are only one piece of a complex prevention and intervention network. However, there are promising findings in this and the Years 9 and 10 Report expected in early 2000.

Since the target population of ECEAP is, by definition, low-income, it is often concluded that many of the families in the ECEAP Longitudinal Study receive public assistance as a means of financial support. Questions regarding who actually receives public assistance are becoming increasingly important as the Temporary Assistance for Needy Families (TANF) Block Grant of the Personal Responsibility and Work Opportunities Reconciliation Act of 1996 changes how public assistance is delivered. Eligibility requirements for public assistance have changed as has the length of time public assistance can be accessed by a given individual or family. It is of interest to examine the characteristics and outcomes of those ECEAP Longitudinal Study participants who have received public assistance as an income source. This report summarizes characteristics and outcomes of the participants in the ECEAP Longitudinal Study who received public assistance as a source of income and, as such, focuses on Goal 8 of the Early Childhood Education and Assistance Program.

ECEAP Philosophy and Goals

During the 1995-96 program year, the philosophy of ECEAP was based on the following theoretical assumptions which, in turn, drove program implementation:

- a young child can benefit substantially from a comprehensive prekindergarten program that fosters "whole-child" development, identifies and remedies health and developmental problems, and increases skills in preparation for success in school and society;

- a child's family is the primary contributor to the child's development and progress;
- access to community resources designed to support the child's development and learning, as well as the family's well-being, should be maximized; and
- low-income children, in particular, should have the opportunity to counteract the impact poverty has on them and their families.

The overall goal of ECEAP is to bring about a greater degree of educational and social proficiency in children from low-income families. It is presumed that gains made in these areas will assist children in dealing with their environment, as well as facing the challenges of the educational process. Recognizing the interdependence of the factors contributing to a child's health, well-being, and development, a comprehensive approach to helping children achieve educational and social competence is set forth in the ECEAP Performance Standards.

Five goals addressed the developmental needs of the children ECEAP served during the 1995-96 program year:

Goal 1 Establish patterns and expectations of success for each child, which will create a climate of confidence for present and future learning and overall development;

Goal 2 Enhance each child's cognitive processes and skills with particular attention to conceptual and communication skills, including appropriate steps to correct current developmental problems;

Goal 3 Encourage self-confidence, spontaneity, curiosity, and self-discipline which will assist in the development of each child's social and emotional well-being;

Goal 4 Enhance each child's health and physical abilities, including appropriate steps to correct current physical problems; and

Goal 5 Enhance each child's access to an adequate diet, as well as the family's knowledge of sound nutritional practices.

Three goals addressed the needs and aspirations of ECEAP families:

Goal 6 Enhance the ability of each child and family to relate to each other and to those outside the family;

Goal 7 Enhance the sense of dignity and self-worth within each child and family; and

Goal 8 Empower families to improve parenting skills, increase knowledge of and access to appropriate resources, advocate for children's and families' needs, and increase self-sufficiency.

The eight goals of ECEAP cluster into four general outcome categories: 1) cognitive and physical development (Goals 2 and 4); 2) social and emotional well-being (Goals 1 and 3); 3) health and nutrition (Goals 4 and 5); and 4) family well-being and empowerment (Goals 6, 7, and 8). This report focuses on the outcomes associated with Goal 8.

The ECEAP Program

ECEAP is a "whole-child," comprehensive, family-focused prekindergarten program designed to help low-income children prepare for and succeed in the educational system. In addition, ECEAP assists families in supporting and participating in their children's success. ECEAP staff, community leaders, and parents collaborate to design and implement programs most appropriate for children and families living in their community.

A multitude of factors affect a child's ability to learn and develop. Such factors may be environmental or individual-based, or may be an interaction of environmental and individual characteristics. With this in mind, ECEAP is comprised of four interactive components: 1) education; 2) health; 3) parent involvement; and 4) family support.

Education. Children are prepared for entry into school through a developmentally appropriate learning environment that: 1) fosters intellectual, social, physical, and emotional growth; 2) emphasizes early identification of and intervention in problems interfering with learning; and 3) eases the transition from prekindergarten to kindergarten and primary education. Local ECEAP providers develop and select a developmentally based curriculum that incorporates readiness skills (such as recognition of numbers, shapes, and colors); language and literacy skills; gross and fine motor skills; social-emotional and self-concept development; and age-appropriate health, nutrition, and personal safety education. Additionally, field trips and visitors to the program broaden children's awareness and understanding of the community in which they live. In general, ECEAP providers strive to expose children to new ideas, concepts, and experiences and create in all children an excitement for discovery and learning.

Cultural awareness and ethnic pride are actively promoted and integrated within ECEAP's educational component. When a majority of children speak a language other than English, at least one teacher or aide who speaks that language actively participates in group and center experiences. In cases where a few children speak an alternate language, one adult, often a community resource person or volunteer, works closely with the children or child.

Health. ECEAP conducts or provides for health screenings within the first 90 days of a child's enrollment in the program. Medical, dental, mental health, and the nutritional needs of each child are evaluated. Remediation of problems identified through the developmental screenings includes referral to community services, identification of community resources, and/or provision of services or funds.

ECEAP health staff assist in updating immunizations against certain vaccine-preventable diseases. In areas where fluoride is not available through drinking water, ECEAP arranges for fluoride treatments for children whose parents grant their consent.

Since few factors in a child's physical and mental development are as critical as adequate nutrition, all children in ECEAP receive at least one meal a day during group sessions. Meals and snacks for children are designed to satisfy the daily nutritional needs for as many nutritional elements as possible, and careful attention is paid to the nutritional needs of young children in the context of their culture when planning the menus. Education about sound nutritional practice is included in the curriculum to encourage lifelong healthy eating habits.

Parent Involvement. Recognized as the primary source of educational instruction and motivation for their children, parents are directly involved with children in the classroom and during home visits. ECEAP provides opportunities for parenting skills training and supports group participation based on needs expressed by parents. Parents are also encouraged to be involved in local program decision making through their program's parent-run Policy Council and subcommittees.

Family Support. ECEAP's commitment to family empowerment is expressed in part via a family support model of service delivery. Staff support families in accessing needed social services and eliminating the need for services through improved family health. ECEAP's family service staff facilitate an assessment of family strengths at program enrollment. ECEAP staff then provide support to families to locate and access community resources in order to enhance family strengths. ECEAP staff also provide awareness and educational training opportunities throughout the year. Collaborative arrangements with, and in-kind contributions from, various service providers and community organizations enable ECEAP staff to link families to a network of support.

Cost of Services

The cost of providing comprehensive services and support to ECEAP children and families has been shared through the collaborative efforts of ECEAP, other state agencies, and community service providers. Local, state, and federal dollars are combined to cover staff salaries and benefits, facilities, equipment and materials, services, transportation, and other costs. Statewide average ECEAP funding per slot for the 1995-96 program year was $3,716.

Program Administration and Implementation

Statewide administration of ECEAP is through the Washington State Community, Trade and Economic Development Community Services Division. Local ECEAP programs operate through various organizations, including school districts, local government agencies, non-profit organizations, child care providers, tribal organizations, and community colleges. ECEAP has evolved into an increasingly community-focused and needs-driven family service. Local flexibility in program design has been encouraged within basic program requirements. Contractors must comply with program requirements along a range specified in program standards.

Three program organizational structures, designated as "center-based," "home-based," and "locally designed," describe most local ECEAP service delivery models in operation during the 1995-96 program year.

Center-Based ECEAP Programs

This program structure provided children and families with:

- at least ten hours per week of group programming spread over three or more days;
- at least one and one-half hours of staff and parent contact time per month; and
- a home visit with the child's family at least twice a year to facilitate education.

Home-Based ECEAP Programs

This program type provided:

- an emphasis on training parents to be effective educators;
- weekly 90-minute visits during which staff members train, role model, and encourage parents to teach their children; and
- a weekly peer group experience for children.

Locally Designed ECEAP Programs

This program structure provided:

- the opportunity for a community to design a program around its unique needs; and
- combinations of elements of center-based and home-based options or a weekly schedule that differs from the typical center-based program.

ECEAP Children and Families

Typically, a child enrolled in ECEAP is three or four years old, not yet in kindergarten, and from a family whose income during the last 12 months or calendar year has been at or below the federal poverty level (110 percent of the federal poverty level starting in the 1999-2000 program year). The intent of ECEAP, to provide enhanced learning opportunities for children at risk of school failure, allows local programs to enroll up to 10 percent of their total capacity with children who are at risk because of neglect, abuse, disabling conditions, or other developmental or environmental factors, regardless of family income. In addition, one of every 10 ECEAP enrollment slots statewide is targeted to Native American children and children of migrant and seasonal farmworkers to help remedy historically limited access to developmental and social services. In 1995-96, ECEAP's eighth year of service, nearly 7,500 children were served.

Evaluating ECEAP's Effectiveness

A legislative requirement for an external evaluation of ECEAP was included in the Early Childhood Assistance Act of 1985. The Northwest Regional Educational Laboratory began examining the effectiveness of ECEAP in 1988 and has completed the eighth year of child and family data collection and analysis. This report provides an in-depth examination of public assistance receipt among the Study population.

Chapter 2 provides an overview of the Study methodology and timeline, a description of the ECEAP and Comparison samples, a description of Study measures and variables, and a discussion of other related research. Results of data analyses follow in Chapter 3. Chapter 4 presents a discussion and summary of results.

WASHINGTON STATE'S

EARLY CHILDHOOD EDUCATION AND ASSISTANCE PROGRAM

CHAPTER 2

THE LONGITUDINAL STUDY DESIGN

Background

The Early Childhood Assistance Act of 1985 established ECEAP and included a legislative requirement to assess program effectiveness. Washington State Community, Trade and Economic Development (CTED), ECEAP's administering agency, contracted with Northwest Regional Educational Laboratory (NWREL) of Portland, Oregon, to conduct the ECEAP evaluation. Since 1988, a quasi-experimental Longitudinal Study of ECEAP has been conducted to measure outcomes of the enrolled children and their families. The primary purpose of the Study is to determine the effectiveness of ECEAP in preparing economically disadvantaged three- and four-year-olds to achieve success in their elementary schooling and beyond. All Study participants were four years old when they received ECEAP services.

The evaluation follows a sample of ECEAP children from the beginning of their ECEAP experience through the 12th grade. A matched Comparison group has been constructed of children who were ECEAP-eligible, but were not served by this program. Comparisons will be made between the ECEAP and the Comparison group on academic achievement, social success, and other key indicators. A broad range of child and family variables was included in the Study in order to capture the comprehensive nature of ECEAP. The extent to which individual differences in children's development is enhanced and sustained and the family's ability to support and enhance their child's development is also addressed.

CTED, the Washington State Office of the Superintendent of Public Instruction, and ECEAP program directors provided input concerning the ECEAP evaluation design and implementation. Instrumentation used to follow children and their families during the elementary school years was collected or developed by NWREL research staff after analysis of first year data. Consideration was given to the capability of the instruments to capture the constructs of interest, the ease of administration, and state and local program resources.

Study Methodology

A number of evaluation questions were posed for the ECEAP Longitudinal Study with a focus on outcomes of ECEAP children and families. Outcome evaluation examines the attainment of program objectives related to short- and long-term change in participants' behavior, attitudes, knowledge, or level of problems. The two general questions an outcome evaluation seeks to answer deal with: 1) level of change, and 2) whether any change experienced was attributable to the program. While the first question can be answered using a pre- and post-test of participants, there are inherent difficulties in attributing change to any program. These problems, or threats to validity, include the influence of extraneous historical events,

maturation of participants, biased selection of groups, mortality of study participants, and statistical regression to the mean.

The problem of attributing change to a program rather than to extraneous factors, such as those cited above, has led to the use of experimental or quasi-experimental research designs in evaluation. The ECEAP Longitudinal Study has employed a quasi-experimental design since random assignment to treatment and control groups was not possible and is a necessary condition for a true experimental design. For example, in a true experimental design, all children eligible for ECEAP participation would be in a pool and randomly assigned to either the ECEAP group or the control group which would not participate in ECEAP. Assignment to either group would be random and not take into consideration level of need or criteria other than ECEAP eligibility. True experimental designs are difficult to implement in real life settings where the human condition is of paramount importance to those implementing and administering social and educational programs. Quasi-experimental designs attempt to approximate experimental control by various methods. In the case of the ECEAP Longitudinal Study, naturally occurring groups, similar to those in the ECEAP program, were used as the control.

The key issue in designing an outcome evaluation is drawing comparisons. Ideally, the groups that are compared were the same before exposure to the program, and, without the program, would have been expected to stay the same. Randomization achieves this in true experimental designs. Quasi-experimental designs only approximate this level of control, and as a result, can yield ambiguous results. In the ECEAP Longitudinal Study, a matched Comparison group was constructed in order to draw conclusions regarding change as a result of program participation.

ECEAP children and their families have been followed since the child's year of ECEAP services and will continue to be followed through the child's 12th grade year or the equivalent in order that outcomes of participation in the program can be assessed. The following questions are the focus of this portion of the evaluation:

- How well is ECEAP preparing children for success in school, i.e., what gains do ECEAP children make in their cognitive, motor, behavioral, and social development that encourage success in school?
- How well is ECEAP preparing families to participate in and support their children's educational experience?
- Do the effects of ECEAP participation last?

To answer these questions, a sample of 1,358 ECEAP children and their families was assessed at the beginning and end of their prekindergarten year and are being assessed annually each spring from kindergarten

through the 6th grade, and then again in 9th and 12th grade. Assessment focuses on child and family success and how outcomes change over time.

Annual data collection has been conducted by local ECEAP providers with assistance from local education agencies. Cognitive, physical, social, emotional, and behavioral outcomes are measured through individually administered cognitive and developmental assessments, parent interviews, teacher ratings of children's behavior and family participation, school records, and reports on children's health. During the 4th and 8th grades, children participate in statewide achievement tests (Comprehensive Test of Basic Skills [CTBS]). Scores from the CTBS are used to compare ECEAP children to the broader population of Washington's children. The fall and spring measures during the ECEAP year, together with the measures used for following children and their families through the 12th grade, encompass a broad definition of competence from which to draw conclusions about later school performance.

A Comparison sample of non-ECEAP children was constructed in the fall of 1991. The Comparison sample allows an examination of how well ECEAP children and families are progressing through the children's educational careers relative to a group of peers who did not participate in a comprehensive prekindergarten program. The questions addressed by this portion of the Longitudinal Study include:

- Are ECEAP children better prepared for success in school than their peers, i.e., are ECEAP children more advanced at the start of school than their peers in terms of cognitive, motor, behavioral, and social development?
- Do families of ECEAP children participate in and support their children's educational experience more than families of Comparison children?
- Do the differences last?

To explore these questions, a Comparison group was constructed of 322 children. The Comparison group children were matched to ECEAP children on age, gender, ethnicity, and primary language, and did not participate in the ECEAP or federal Head Start program. While income or poverty was a variable the groups were to be matched on, key differences between the two groups existed with regard to this variable. These poverty differences have resulted in part because: 1) ECEAP programs recruited Comparison children from among children participating in the free and reduced-price lunch program, whose income eligibility requirements are higher than the requirement for ECEAP participation; and 2) ECEAP programs prioritize service in their area for families with lowest incomes, resulting in reduced number of unserved families at the lower levels of poverty. The Comparison group will be followed with the ECEAP sample through the 12th grade. For the remainder of the Study, the Comparison children will be followed each spring with the same measures as the ECEAP children.

Previous reports on the ECEAP Longitudinal Study have examined all outcome measures for all cohorts. Such reports have allowed an examination of the status of participants on the various measures and indices on an annual basis. This reporting method provides an overview of the status of participants on wide ranging areas of concern. There has been a need to examine the wealth of data provided by the children and families in the ECEAP Longitudinal Study in light of emerging programmatic as well as social issues. This report departs from previous ECEAP Longitudinal Study reports in that the focus of the data analysis is on one particular issue that has been determined to be of high programmatic and social importance and interest by ECEAP administrators and researchers. Therefore, the Year 8 ECEAP Longitudinal Study report will focus on the socioeconomic status of Study participants, specifically as it relates to receipt of public assistance.

Study Timeline

The Study began in the fall of 1988 when the first of three cohorts of children enrolled in ECEAP. The Study will continue through the Study participants' 12th grade year or the equivalent. Table 2.1 displays the timeline of the Longitudinal Study until Cohort 3 children reach 12th grade. In total, 1,358 ECEAP children were recruited to participate in the Study. Depending on the year of their enrollment in the program, those remaining (N = 984) were enrolled in 4th, 5th, or 6th grade during Year 8 of the Study.

Table 2.1a

ECEAP Longitudinal Study Timeline
Years 1-8

	YEAR 1 1988/89	YEAR 2 1989/90	YEAR 3 1990/91	YEAR 4 1991/92	YEAR 5 1992/93	YEAR 6 1993/94	YEAR 7 1994/95	YEAR 8 1995/96
ECEAP	Cohort 1	Cohort 2	Cohort 3					
KINDERGARTEN		Cohort 1	Cohort 2	Cohort 3 & Comparison				
GRADE 1			Cohort 1	Cohort 2 & Comparison	Cohort 3 & Comparison			
GRADE 2				Cohort 1 & Comparison	Cohort 2 & Comparison	Cohort 3 & Comparison		
GRADE 3					Cohort 1 & Comparison	Cohort 2 & Comparison	Cohort 3 & Comparison	
GRADE 4						Cohort 1 & Comparison	Cohort 2 & Comparison	Cohort 3 & Comparison
GRADE 5							Cohort 1 & Comparison	Cohort 2 & Comparison
GRADE 6								Cohort 1 & Comparison

Table 2.1b

ECEAP Longitudinal Study Timeline
Years 9-16

	YEAR 9 1996/97	YEAR 10 1997/98	YEAR 11 1998/99	YEAR 12 1999/00	YEAR 13 2000/01	YEAR 14 2001/02	YEAR 15 2002/03	YEAR 16 2003/04
GRADE 5	Cohort 3 & Comparison							
GRADE 6	Cohort 2 & Comparison	Cohort 3 & Comparison						
GRADE 7	Cohort 1 & Comparison							
GRADE 8								
GRADE 9			Cohort 1 & Comparison	Cohort 2 & Comparison	Cohort 3 & Comparison			
GRADE 10								
GRADE 11								
GRADE 12						Cohort 1 & Comparison	Cohort 2 & Comparison	Cohort 3 & Comparison

As the table illustrates, the Study has the following structure:

- **Cohort 1:** The first cohort of ECEAP children was recruited in the fall of 1988 and assessed at that time and again in the spring of 1989. These children began the follow-up in the spring of 1990 and will be further assessed each spring until they finish high school. The Comparison sample for Cohort 1 was recruited in the fall of 1991 when the children were in second grade, and will be followed each spring through grade 6 and then at grade 9 and grade 12.
- **Cohort 2:** Cohort 2 ECEAP children were recruited in the fall of 1989 and assessed in the fall and spring of their ECEAP year. They will be followed until they finish high school. The Comparison sample for Cohort 2 was recruited in fall of 1991 when the children were in first grade and will also be followed each spring through grade 6 and then at grade 9 and grade 12.
- **Cohort 3:** In the fall of 1990, the third cohort of ECEAP children was recruited and assessed in the fall and spring of their ECEAP year. Children in this cohort will be followed through their high school experience. The Comparison sample for Cohort 3 was recruited in the fall of 1991 when the children began kindergarten

and will be followed each spring as well through grade 6 and then at grade 9 and grade 12.

This report presents Study results for each cohort from Year 1 of the evaluation Study through Year 8, when the first cohort was in 6th grade, with regard to socioeconomic status, specifically related to receipt of public assistance.

The ECEAP Sample

The ECEAP sample represents approximately one-third of the number of children for whom enrollment openings were available during the first three years of the Study. ECEAP children were recruited from three successive cohorts of prekindergarten entrants beginning in the fall of 1988. ECEAP contractors were assigned to a specific cohort, with priority for the initial cohort placed on well-established programs. This ensured that a fully-developed ECEAP program was in place when the children were sampled. Some contractors enrolling large numbers of children participated in multiple cohort samples in order to ease the work load required at key data collection points. ECEAP contractors are divided among the cohorts in the following manner:

- **Cohort 1 Contractors:** Chelan-Douglas Child Services Association; Community Colleges of Spokane; Economic Opportunity Committee of Clark County; Olympia School District; Puget Sound Educational Service District; Snohomish County Human Services; and Washington State Migrant Council.
- **Cohort 2 Contractors:** Aberdeen School District; Kennewick School District; Omak School District; Puget Sound Educational Service District; Reliable Enterprises, Centralia; Walla Walla School District; and Washington State Migrant Council.
- **Cohort 3 Contractors:** City of Seattle; Clallam-Jefferson Community Action; Community Child Care Center; Community Colleges of Spokane; Dayton School District; Economic Opportunity Committee of Clark County; Enterprise for Progress in the Community; Granger School District; Kitsap Community Action Program; Lewis-Clark Early Childhood Program; Lower Columbia College; Manson School District; Mid-Columbia Children's Council; Northeast Washington Rural Resources; Olympia School District; Puget Sound Educational Service District; Selah School District; Skagit Valley College; Snohomish County Human Services; South Bend School District; United Indians of All Tribes Foundation; Washington State Migrant Council; and Whatcom County Opportunity Council.

Selection of children for participation in the Study was conducted by ECEAP program staff at the local level. Program staff were instructed to draw a random sample of one-third of the children on their fall enrollment list. Cohort 1 contractors sampled 250 ECEAP children and families, and Cohort 2 contractors selected 156 ECEAP children and families. Cohort 1 and 2 contractors that expanded to more than 125 percent of their 1988-89

enrollment recruited additional children and families for Cohort 3. Cohort 3 contractors selected a sample of 952 ECEAP children and families, bringing the total Study sample to 1,358 ECEAP children and families.

The demographic characteristics of children and families in the ECEAP sample are described in the Year 3 Technical Report. The degree to which the ECEAP sample is representative of the entire ECEAP population is discussed in the Year 3 Technical Report.

The Comparison Sample

A Comparison group was constructed during the fall of 1991. ECEAP contractors recruited 322 children who were eligible for ECEAP, but who did not participate in a prekindergarten program, to be included in the Comparison sample. The goal was to recruit 450 children who were enrolled within the same schools as ECEAP children and who "matched" ECEAP children in terms of age, gender, ethnicity, primary language, and level of poverty (defined as eligibility for the free or reduced lunch program). The population from which to draw the Comparison sample was limited due to the difficulty and sensitivity of obtaining income eligibility information from families, and the reluctance of many eligible families to participate.

The Comparison sample is divided among the three cohorts so a direct comparison can be made to a sub-sample of ECEAP children in each cohort. Having a separate Comparison sample for each cohort of ECEAP children strengthens the interpretation of comparative analyses by eliminating any time-lapse effects that may confound data gathered at different points in time. Additionally, to minimize any effects on data due to variation among educational programs and experiences, Comparison children were recruited in schools where ECEAP children were enrolled. This strengthens the degree to which the Comparison sample is representative of the ECEAP sample and ECEAP population.

With assistance from school staff, ECEAP staff used a variety of strategies to identify and recruit Comparison families to participate in the Study. Letters (typically co-signed by the principal and/or classroom teachers) and Study information were sent home to families or attached to the school newsletter. Information was presented about the Study at parent meetings as well where ECEAP staff were available to discuss Study participation with interested families.

Children and families who met Comparison group criteria, and whose parents signed an informed consent form, were matched to ECEAP children enrolled in the school by their age, gender, ethnicity, and primary language. The ECEAP children then became part of the "matched" ECEAP sample for comparison purposes.

Data Collection

In all three cohorts, ECEAP children were assessed in the fall and spring of their ECEAP year, and will continue to be assessed each spring through grade 6 and then again in their 9th and 12th grade year. The cohorts differ, however, in the timing of the Comparison sample construction. In addition, the Comparison children and the subset of ECEAP children to whom they

were matched were assessed in the fall of 1991, the year of Comparison recruitment. More specifically:

- **Cohort 1:** A baseline comparison was made between a sub-sample of 77 Cohort 1 ECEAP children (i.e., the matched ECEAP sample) and a sample of 77 Comparison children at the beginning of their second grade year. In the spring of second grade, the Comparison children and the Cohort 1 ECEAP children were assessed. Both groups of Cohort 1 children will continue to be assessed every spring through the 6th grade and then at grade 9 and grade 12 or the equivalent.
- **Cohort 2:** A baseline comparison was made between a sub-sample of 62 Cohort 2 ECEAP children and 62 Comparison children at the beginning of their first grade year. The Comparison children and the Cohort 2 ECEAP children were assessed in the spring of first grade, and will continue to be assessed each spring through the 6th grade and then at grade 9 and grade 12 or the equivalent.
- **Cohort 3:** A baseline comparison was made between a sub-sample of 183 Cohort 3 ECEAP children and 183 Comparison children at the beginning of kindergarten. The Comparison children and the Cohort 3 ECEAP children were assessed in the spring of their kindergarten year, and will be assessed again each spring through the 6th grade and then at grade 9 and grade 12 or the equivalent.

Measures and Study Variables

The ECEAP Longitudinal Study design includes a variety of child and family variables to measure effects of the comprehensive prekindergarten and family assistance program. Data collection instruments were selected and/or developed to meet the following requirements:

- Address the central questions of the Study;
- Encompass the comprehensive nature of ECEAP's child and family intervention;
- Accommodate the considerable diversity among programs;
- Enable program staff to collect data accurately and with minimal disruption to their programs;
- Respect time and cooperation of participating families and maximize their retention in the Study; and
- Respect the impact on school district and school staff.

The initial set of instruments proposed for use during the ECEAP year was reviewed by ECEAP directors and staff. Follow-up measures used during the early elementary school years, developed after the first year's analysis, were also based on the criteria listed above. The resulting measures either directly assess the child, directly assess the parent and family, or solicit program and

school staff ratings of child and family behaviors. A description and copies of the instruments used during the children's ECEAP year are in the Year 3 Technical Report. Measures used during Year 4 to determine a baseline comparison between ECEAP and Comparison children in the fall, and then to follow-up all children in the spring, are described in the Year 4 Technical report.

Child Outcomes

Program staff used the **Parent Interview Form (PIF)** to gain parents' perspectives regarding their child's adjustment to school; their child's cognitive and physical development, including their child's development and progress compared to classmates; the types of special services or programs their child may have received; and occurrences of special recognition for good schoolwork and/or behavior, or contact from the school about problems with their child's schoolwork, grades, or attendance. In addition, families were asked several questions related to their child's health and nutrition, including: types of health or development problems; ratings of health and nutrition status on a five-point scale from excellent to poor; occurrence of any accidents, injuries, serious illnesses, or major medical treatments; and the nature of visits to a doctor and dentist. Families were also asked to rate the adequacy of their family's health resources (medical and dental care), and indicate whether their family has health insurance.

Teachers provided information, using an instrument called the **Student Information Form (SIF)**, about children's attendance records, classroom progress, and referral to/placement in special services or programs. To provide a sense of children's social and emotional well-being, teachers were also asked to rate each child's social and emotional behavior in the classroom using a **Student Behavior Inventory (SBI)** adapted from Shaefer, Hunter and Edgerton (1984).

Family Outcomes

Variables related to family well-being and empowerment were divided into three general areas: family resources; parents' perceptions regarding their support for their child; and family participation in their child's education. Families were asked to rate the adequacy of their family resources (including housing, food, heat, and money for bills), provide information about their family's utilization of community services, and describe parents' current education and employment status.

Parents' perceptions regarding their support for their child were assessed through questions on the PIF about their educational expectations for their child, the types of activities they engage in with their child on a regular basis, and how they felt recently about, for example, their control over their child's education and the amount of time their family had to be together.

Both families and teachers were asked to rate the family's participation in a range of school-related activities and to indicate whether particular barriers to participation existed. Families were asked several questions during their interview using the PIF, and teachers were asked to complete the **Family Participation in School Activities (FPSA)** form.

The measures and variables described above were analyzed with regard to socioeconomic status of Study participants, specifically related to receiving public assistance as an income source. Findings from these analyses are described in this report.

CHAPTER 3

CHARACTERISTICS OF STUDY PARTICIPANTS RECEIVING PUBLIC ASSISTANCE FROM YEAR 1 TO YEAR 8

Since 1988, data have been collected on three cohorts of ECEAP participants and their families. Beginning in 1991, data on three cohorts of Comparison children and families have been collected as well. During Year 8 of the ECEAP Longitudinal Study, participants were enrolled in grades 4, 5, and 6. This chapter will present findings from analysis of the data collected from Year 1 through Year 8 on all cohorts of ECEAP and Comparison group participants with regard to socioeconomic status, specifically as it relates to receiving public assistance as an income source. Table 3.1 displays the data collection point, the time period, and the Study year.

Table 3.1

Data Collection Time Point, Time Period, and Study Year

Time Point	Time Period	Study Year
Time 1	Fall 1988	ECEAP Year Fall-Cohort 1 only
Time 2	Spring 1989	ECEAP Year Spring
Time 3	Fall 1990	ECEAP Year Fall-Cohort 2 only
Time 4	Spring 1990	Year 2
Time 5	Fall 1991	ECEAP Year Fall-Cohort 3 only
Time 6	Spring 1991	Year 3
Time 7	Spring 1992	Year 4
Time 8	Spring 1993	Year 5
Time 9	Spring 1994	Year 6
Time 10	Spring 1995	Year 7
Time 11	Spring 1996	Year 8

Study Sample

A total of 1,358 ECEAP and Comparison group members initially participated in the Longitudinal Study. A total of 984 Study participants remain after seven years of data collection. Table 3.2 displays the number of ECEAP children and families participating in the Longitudinal Study since Year 1 and Table 3.3 displays the same information for the Comparison group members. In addition to the numbers of participants specified in Tables 3.2 and 3.3, there were an additional 37 participant families specified as an "alternate Comparison group."

Table 3.2

Number of ECEAP Longitudinal Study Participants: Year 1 through Year 8

	Year							
	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*
Number	196	352	1127	887	867	890	794	752

Table 3.3

Number of ECEAP Comparison Group Participants: Year 4 through Year 8

	Year				
	4	*5*	*6*	*7*	*8*
Number	299	261	249	214	195

Study Sample Retention

The Gross Follow-Up Completion Rate (Ribisl, Walton, Mowbray, Luke, Davidson, and Boots-Miller, 1996) is calculated using the formula:

$$\frac{\text{Number of Completed Follow-Up Interviews}}{\text{Number of Completed Baseline Interviews}}$$

The Gross Follow-Up Completion Rate for Year 8 of the ECEAP Longitudinal Study was 55 percent for *ECEAP participants and families* (Year 8 completed follow-up interviews = 752/completed Baseline interviews = 1,355 = 55 percent completion rate). The Gross Follow-Up Completion Rate for the *Comparison group* was 65 percent from Year 4, the point of entry for all Comparison group children and families, (completed Comparison group Baseline interviews = 299) to Year 8 (Year 8 completed Comparison group follow-up interviews = 195). Findings of a meta-analysis of 85 studies indicated the length of the follow-up period explained less than 5 percent

of the variability in attrition rates (Hansen, Tobler, and Graham, 1990). In other words, the length of the follow-up period had a relatively small influence on the amount of attrition experienced in a study.

Retention and attrition of ECEAP Longitudinal Study participants is complicated by a number of factors related to the nature of the population and the Study design. The Study is following three cohorts of ECEAP enrollees and a Comparison group of families over a period of 16 years. Tracking families from year to year can be problematic for a variety of reasons. Some of the more frequent occurrences that arise are families moving in and out of geographic locations, changing residences and telephone service within a particular geographic location, and choosing not to participate during a particular year.

Characteristics of ECEAP Study Participants Receiving Public Assistance

The characteristics of the Study participants receiving public assistance are described below. Data from Study enrollment and the most recently available year of data collection (1995-96) were used in the analyses. Enrollment data provides baseline information from which to measure change. Data from Year 8 (1995-96) provides the most recent information available on income status. With welfare reform initiatives being implemented during 1996, an analysis of the data available from 1996 may be viewed as a second baseline from which future change can be assessed with regard to the possible impact of this legislation. As income data becomes available from subsequent data collection cycles, further analysis will be conducted to assess the possible impact of welfare reform efforts on this population.

Poverty Status of ECEAP Study Participants

ECEAP Study participants are asked to report their annual income and the number of individuals supported by this income each year of the Longitudinal Study during the Parent Interview. This data provides the basis from which poverty status is calculated based on the Washington need standard for a family of four. For example, during 1996, the need standard for a family of four in the state of Washington was $1,450 per month.

Poverty status was calculated for all Study participants reporting income data for a particular year. Nearly all of the ECEAP group participants were at or below poverty level at the time of enrollment in ECEAP. Since ECEAP targets services to children considered at risk of school failure due to neglect, abuse, or disabling conditions regardless of family income, not all ECEAP enrollees were at or below the poverty level. Slightly over half of the Comparison group participants were at or below the poverty level at the time of Study enrollment (Year 4). Table 3.4 displays the poverty status rates for both the ECEAP and Comparison group members at the time of ECEAP and Study enrollment.

Table 3.4

Poverty Status at Enrollment for ECEAP Study Participants

	ECEAP Group (N = 1,247)[1]		Comparison Group (N = 289)[2]	
Poverty Status	*N*	*%*	*N*	*%*
Above poverty level	64	5	135	47
At or Below poverty level	1,183	95	154	53
Total	1,247	100	289	100

Analysis of the Year 8 data shows a decline in the poverty status since enrollment in the ECEAP Longitudinal Study. Table 3.5 displays poverty status rates for both the ECEAP and Comparison group members for Year 8 of the Study.

Table 3.5

Poverty Status at Year 8 for ECEAP Study Participants

	ECEAP Group (N = 734)		Comparison Group (N = 192)	
Poverty Status	*N*	*%*	*N*	*%*
Above poverty level	342	47	117	61
At or Below poverty level	392	53	75	39
Total	734	100	192	100

Table 3.5 shows that slightly over half of the Year 8 ECEAP group Study participants were at or below poverty level. There was a shift in poverty status since enrollment for ECEAP group participants with 42 percent fewer ECEAP group participants at or below poverty level during Year 8 than at the time of enrollment (see Table 3.4). There was a shift in poverty status for the Comparison group participants since enrollment into the Study with 14 percent fewer Comparison group participants at or below poverty level during Year 8 (see Table 3.4).

Table 3.6 displays the group membership of the ECEAP Longitudinal Study participants determined to be at or below poverty level at enrollment and during Year 8.

[1] ECEAP group members enrolled in ECEAP and the Longitudinal Study during Years 1, 2, and 3.

[2] Comparison group members were NOT enrolled in ECEAP and enrolled in the Longitudinal Study during Year 4.

Table 3.6

ECEAP Study Participants At or Below Poverty Level by Group Membership at Enrollment (N = 1,337) and Year 8 (N = 467)

	Enrollment At or Below Poverty Level		Year 8 At or Below Poverty Level	
Group	*N*	*%*	*N*	*%*
ECEAP	1,183	88	392	84
Comparison	154	12	75	16
Total	1,337	100	467	100

Table 3.6 shows that at enrollment, for the Study participants who were at or below poverty level, 88 percent were from the ECEAP group and 12 percent were from the Comparison group. At Year 8, 84 percent were in the ECEAP group and 16 percent were in the Comparison group. The percent of participants at or below the poverty level must be compared to the percent of participants in the ECEAP and Comparison group in the entire Study sample. During Year 8, 79 percent of the Study participants were in the ECEAP group and 21 percent were in the Comparison group. The ECEAP group members have historically had a larger percent of members at or below poverty level (see Tables 3.4 and 3.5) since this group has historically had a lower annual income than the Comparison group members. The ECEAP group members have had lower annual incomes than the Comparison group members every year since the Comparison group entered the Longitudinal Study in Year 4. Even among those Study participants at or below poverty level, ECEAP group members have had the lowest incomes. Therefore, it is not surprising to find a greater percent of the ECEAP group members at or below poverty level than Comparison group members. Table 3.7 displays the mean and median annual incomes at Study enrollment for those at or below poverty level.

Table 3.7

Annual Household Income at Enrollment[3] for ECEAP Study Participants At or Below Poverty Level

Group	Mean Income	Median Income[4]
ECEAP[5]	$ 7,651	$ 7,044
Comparison[6]	10,714	10,000

[3] See Footnotes 1 and 2.
[4] The point on the scale where half of the scores are larger than the median, and half are smaller.
[5] See Footnote 1.
[6] See Footnote 2.

During Year 8, the mean, or average, annual income of the ECEAP and Comparison group members from the *entire* ECEAP Longitudinal Study differed by almost $1,800, and there was a difference of almost $2,200 in the median[7] annual income between the groups as well. Table 3.8 displays the mean and median annual income for Year 8 ECEAP and Comparison group members who are at or below poverty level.

Table 3.8

Annual Household Income of Year 8 ECEAP and Comparison Group Participants At or Below Poverty Level (N = 467)

Group	Mean Income	Median Income[8]
ECEAP	$11,558	$10,751
Comparison	13,317	12,950

The median annual income may provide a more accurate assessment of annual income. The mean, or average, can be affected by extreme high or low values therefore providing an erroneous impression of the data. The median, on the other hand, is unaffected by the size of the few extreme values within the data since it is the midpoint at which half the cases fall above and half fall below.

Income Sources of ECEAP Study Participants At or Below Poverty Level

The ECEAP Longitudinal Study participants are asked to report the sources of their income each year during the Parent Interview. Respondents may report more than one source of income since it is possible to derive income from multiple sources. At enrollment, ECEAP Study participants had slightly over one income source. The Year 8 ECEAP Study participants had a mean of nearly one and a half income sources. The most noticeable increases in the mean income sources were found in those at or below the poverty level. The only group to experience a decrease in mean income sources was the Year 8 Comparison group members who were above the poverty level.

It was of interest to determine the number and types of income sources for the ECEAP Longitudinal Study participants who were determined to be at or below poverty level. The number of income sources for the ECEAP and Comparison group participants at or below the poverty level at enrollment and Year 8 are displayed in Table 3.9.

[7] See Footnote 4.
[8] See Footnote 4.

Table 3.9

Number and Percent of Income Sources of Year 8 ECEAP and Comparison Group Participants At or Below Poverty Level

	Enrollment (N = 1,337)				Year 8 (N = 467)			
	ECEAP		Comparison		ECEAP		Comparison	
Number of Income Sources	*N*	*%*	*N*	*%*	*N*	*%*	*N*	*%*
0	32	3	8	5	3	1	1	1
1	968	82	101	66	212	54	44	59
2	173	15	40	26	149	38	22	29
3	9	1	5	3	26	7	8	11
4	1	<1	0	0	2	<1	0	0
Total	1,183	100	154	100	392	100	75	100

As can be seen from Table 3.9 above, most ECEAP group members and approximately two-thirds of the Comparison group members had one income source at Study enrollment. There was an increase in multiple sources of income from enrollment to Year 8. Approximately 15 percent of the ECEAP group participants had two or more sources of income at enrollment; 45 percent of ECEAP group members had two or more sources of income during Year 8. Twenty-nine percent of the Comparison group members had two or more sources of income at enrollment while 40 percent had multiple income sources during Year 8.

It would be expected that the majority of the participants who were at or below poverty level would receive public assistance as a source of income. Two-thirds of the ECEAP group participants receiving public assistance at enrollment were at or below the poverty level. Interestingly, just over half of the Study participants at or below poverty level received public assistance as a source of income during Year 8. Five percent of the Study participants who were above the poverty level received public assistance as an income source during Year 8 as well. Slightly over one-fourth of all Study participants (N = 266 or 28.1 percent) received public assistance as an income source during Year 8 regardless of poverty status.

The sources of income are queried each year of the ECEAP Longitudinal Study during the Parent Interview. Table 3.10 displays the sources of income for those found at or below poverty level during Year 8 of the Study. Since participants may have multiple income sources, the totals in Table 3.10 will be greater than the total number at or below poverty level for each year.

Table 3.10

Sources of Income of ECEAP Longitudinal Study Participants At or Below Poverty Level at Enrollment (N = 1,183) and Year 8 (N = 467)

	Number			
	Enrollment		Year 8	
Source of Income	*N*	*%*	*N*	*%*
Wages	426	36	248	53
Public Assistance	774	65	236	51
Social Security	46	4	81	17
Child Support	70	6	70	15
Unemployment Compensation	24	2	35	7
Pension	5	< 1	3	1
Other Income			35	7

The two largest income categories at enrollment and Year 8 were wages and public assistance. The least utilized income category at both time periods was pensions since most of the families in the ECEAP Longitudinal Study are not of an age where retirement and pension income would be accessible. The most notable shifts from enrollment to Year 8 were the decrease in public assistance as an income source and the increase of wages. There are 17 percent more Study participants reporting wages as an income source and 14 percent fewer reporting public assistance as a source of income.

It was of interest to determine if those at or below the poverty level who received public assistance as a source of income had additional sources of income other than public assistance. Table 3.11 presents the findings from the analysis of additional income sources for those receiving public assistance and at or below the poverty level.

Table 3.11

Number and Percent of Income Sources In Addition To Public Assistance of ECEAP and Comparison Group Participants At or Below the Poverty Level Receiving Public Assistance at Enrollment (N = 774) and Year 8 (N = 236)

	Enrollment		Year 8	
Number of Income Sources	*N*	*%*	*N*	*%*
0	629	81	112	47
1	136	18	97	41
2	8	1	25	11
3	1	<1	2	1
Total	774	100	236	100

Analysis of the data reported in Table 3.11 found that 145 (19 percent) participants who received public assistance and were at or below the poverty level at enrollment also had additional sources of income. At Year 8, 124 (53 percent) of the Study participants who received public assistance and were at or below the poverty level also had additional sources of income. There was a 34 percent shift in the number of Study participants with other sources of income in addition to public assistance from enrollment to Year 8.

The types of income sources in addition to public assistance for the ECEAP Longitudinal Study participants at enrollment and Year 8 who were at or below the poverty level and received public assistance is shown in Table 3.12.

Table 3.12

Sources of Income Other Than Public Assistance for ECEAP Longitudinal Study Participants At or Below Poverty Level with Multiple Sources of Income at Enrollment (N = 145) and Year 8 (N = 124)

	Enrollment	Year 8
Source of Income	*Number*	*Number*
Wages	92	60
Social Security	38	40
Child Support	5	30
Unemployment Compensation	19	3
Pension	1	0
Other Income		13

The most prevalent sources of income other than public assistance for those with multiple income sources were wages at both time periods (nearly two-thirds of the participants at enrollment and half at Year 8) followed by social security (approximately one-third of enrollment and Year 8 participants). Child support was an income source for 3 percent of the participants who had multiple income sources at enrollment and increased to 24 percent at Year 8. Unemployment compensation was an income source for 13 percent of those with multiple income sources other than public assistance at enrollment and dropped to 2 percent at Year 8. Pension was the least prevalent category for those with multiple income sources at both time periods and is reflective of the age of the population under study.

Family Environment of ECEAP Study Participants

Characteristics of the family environment are probed each year during the Parent Interview. Characteristics such as current family living situation, marital status, employment status, and family resources are reported by the Study respondents.

Living Situation. ECEAP Longitudinal Study respondents are asked to identify the current living situation of the ECEAP Study child. Categories include the child living with both parents, with one parent only, with a parent and a step-parent, with relatives, foster parents, with one parent and the parents' partner, or some other configuration. It was of interest to identify the living situations of those ECEAP Study families who were receiving public assistance as an income source. Table 3.13 reports the living situations for the children in the Study whose families were receiving public assistance as an income source.

Table 3.13

Family Living Situations of ECEAP Longitudinal Study Children Receiving Public Assistance at Enrollment (N = 857) and Year 8 (N = 266)

	Enrollment		Year 8	
Living Situation	*N*	*%*	*N*	*%*
Both Parents	178	21	55	21
Mother Only	624	73	143	54
Mother and Stepfather	6	1	22	8
Father Only	13	2	12	5
Father and Stepmother	1	< 1	3	1
Grandparents or Relatives	22	3	13	5
Foster Parents	3	< 1	0	0
Mother and Partner[9]			14	5
Father and Partner[10]			3	1
Joint Custody[11]			1	< 1
Other	3	< 1	0	0
Missing	7	1	0	0
Total	857	100	266	100

The most notable shift in the living situations of the Study children who lived in families receiving public assistance was a decrease in those living with mother only. There were 19 percent fewer children living with their mother only during Year 8 than at enrollment. There was an increase of nearly 8 percent from enrollment to Year 8 in the number of ECEAP Study children living with mother and stepfather and receiving public assistance as an income source. Comparisons cannot be made with regard to changes in children living with mother or father and partner and those in joint custody situations since these categories were not used at the time of Study enrollment.

It was of interest to examine the data regarding family living situation in light of those who do and do not receive public assistance. During Year 8, those children living with mother only, father only, or grandparents or other relatives have the highest percentage of living in households where public assistance is an income source. Approximately half of the children living in these situations during Year 8 lived in a household that received public assistance.

[9] This category was not used at enrollment.
[10] See Footnote 9.
[11] See Footnote 9.

The children living in households where there were two adults present (both parents and parent and step-parent) reported the lowest percentage of family situations where public assistance was an income source.

Parental Education Level. Parental education level appeared to impact receipt of public assistance as a source of income. There did not appear to be a shift in parental employment status from enrollment in the ECEAP Longitudinal Study to Year 7 (1994-1995), the last year in which parental educational status data was collected. At enrollment as well as Year 7, three-fourths of the ECEAP Study children whose families received public assistance as an income source had mothers with less than a high school education, a high school diploma or GED, or some college. The remaining one-fourth of the ECEAP Study children who received public assistance had mothers who had graduated from trade school or community college, received a baccalaureate degree, or had some other type of education. Similar findings exist for fathers' education level. Slightly less than three-fourths of the ECEAP Study children whose families received public assistance had a father with less than a high school education, a high school diploma or GED, or some college. Slightly more than one-fourth of the ECEAP Study children who received public assistance had fathers who graduated from trade school, community college, or a four-year college, or had some other type of educational background.

Parental Employment Status. Parental employment status is reported during the Parent Interview each year. Employment status impacts receipt of public assistance as an income source since those who are employed, either full- or part-time, have a lower utilization of this source of income. Table 3.14 displays parental employment status for those who receive public assistance.

Table 3.14a

Parental Employment Status of Year 8 ECEAP Longitudinal Study Participants Receiving Public Assistance as an Income Source

Mother's Employment Status (N = 263)		
Employment Status	*Number*	*Percent*
Full-Time	28	11
Part-Time	34	13
Unemployed	98	37
Disabled	16	6
Retired	4	2
Homemaker	55	21
Student	24	9
Other	4	2
Total	263	100

Table 3.14b

Parental Employment Status of Year 8 ECEAP Longitudinal Study Participants Receiving Public Assistance as an Income Source, Continued

Father's Employment Status (N = 101)		
Employment Status	*Number*	*Percent*
Full-Time	46	45
Part-Time	11	11
Unemployed	25	25
Disabled	9	9
Retired	5	5
Homemaker	2	2
Student	1	1
Other	2	2
Total	101	100

There was a 20 percent combined increase during Year 8 in the number of children living with mothers or fathers who received public assistance and worked full- or part-time. There was also an increase during Year 8 in the children living in families who received public assistance and the mother or father was unemployed. When children who lived with mothers or fathers who received public assistance were compared to those children who lived with mothers or fathers who did not receive this source of income, approximately 90 percent of parents who did not receive public assistance worked full-time.

Family Resources. Parents were asked during the Parent Interview to rate the adequacy of their resources. The Family Resource Adequacy Index (FRAI) contains 16 items and is rated on a scale of one (not at all adequate) to five (almost always adequate). Items in the FRAI included having food for two meals a day, money to pay monthly bills, medical care for the family, dependable transportation, etc. All items from the FRAI were scaled to give a global rating of the adequacy of resources available to the family. Table 3.15 displays the FRAI scores.

Table 3.15

Family Resource Adequacy Index Mean Scores for Year 8 ECEAP Longitudinal Study Participants (N = 947)

	Mean Scale Score
Not Receiving Public Assistance	4.35
Receiving Public Assistance	3.97

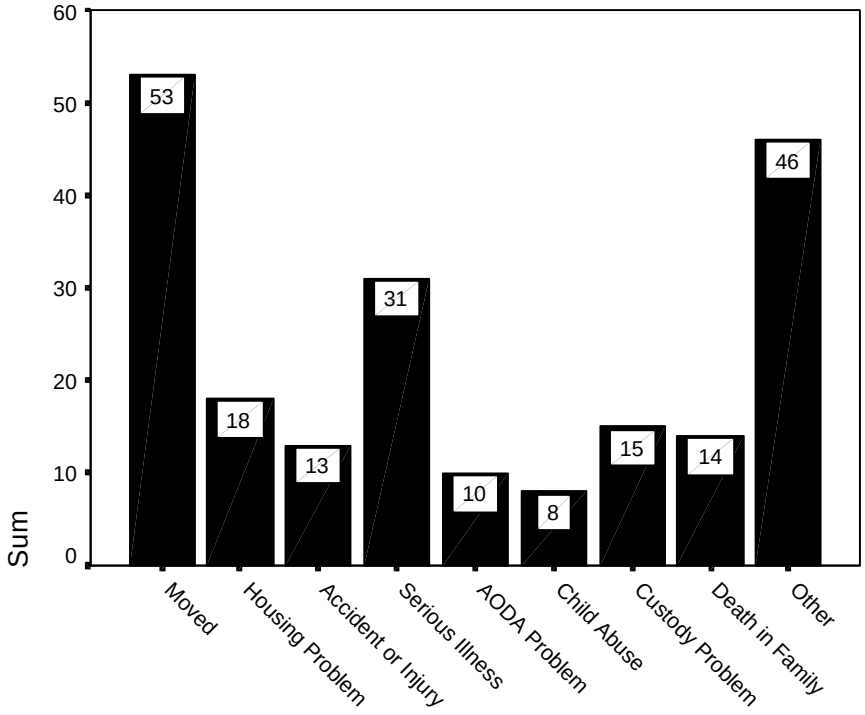
The difference between the FRAI scale score for those receiving and not receiving public assistance for Year 8 was statistically significant. This means that receiving public assistance is related to the overall resource adequacy score. Those who received public assistance reported less adequate resources than those who did not receive public assistance, and this was not due to chance alone.

Significant Events. Parents were asked to indicate which, if any, significant events occurred during the past year that impacted the family. Events included in this item were moving, housing problems, accidents, alcohol and drug problems, and so on. Forty-six percent (N=432) of the Year 8 ECEAP Longitudinal Study participants reported having an event during the past year that impacted their family. Slightly over two-thirds of those who reported a significant event during the past year did not receive public assistance; slightly under one-third of those reporting a significant event received public assistance as a source of income. There was a significant ($p < 0.05$) correlation between reporting a significant event and public assistance receipt. The Pearson Correlation coefficient was negative indicating that those who received public assistance reported significant events less frequently. Conversely, those who did not receive public assistance report significant events at a greater frequency. A correlation coefficient is a measure of the relationship between two variables. It describes the tendency of two variables to vary together; that is, it describes the tendency of high or low values of one variable to be regularly associated with either high or low values of the other variable. A correlation coefficient does not tell whether or not one variable is *causing* the variation in the other and cannot establish causation. Therefore, it cannot be stated that receiving public assistance *caused* fewer significant events to occur; neither can it be said that not receiving public assistance *caused* more significant events to occur.

It was of interest to examine the types of significant events occurring during the past year as reported by parents. Graph 3.1 below displays the frequency of significant events reported by those receiving public assistance.

Graph 3.1

Frequency of Significant Events Reported by Year 8 ECEAP Longitudinal Study Participants Receiving Public Assistance (N = 266)



There was a significant ($p < 0.05$) correlation between reporting housing problems and receiving public assistance. The Pearson Correlation coefficient was positive indicating that those who received public assistance reported housing problems more frequently than those who did not receive public assistance. This may be due to the inability of public assistance recipients to find quality, affordable housing in the areas in which they resided.

Health and Well-Being of ECEAP Study Participants

The health and well-being of Study participant families was assessed in the Parent Interview. Aspects of the child's and family's health and nutrition practices were surveyed on an eight-item scale. In addition, medical and dental service use was examined as well as the existence of health insurance coverage to pay for such visits. Parental well-being was examined using an eleven-item well-being scale. Each of these scales and items will be reported below.

Health and Nutrition. An eight-item survey was used to examine aspects of the child's and family's health and nutrition. Each item was rated by parents during the Parent Interview using a five point scale, with 1 equal to poor and 5 equal to excellent. Table 3.16 displays the mean scores of each of the items in the scale for those receiving public assistance and those not receiving public assistance.

Table 3.16

Mean Scores of Parental Reports of Child and Family Health and Nutrition for Year 8 ECEAP Longitudinal Study Participants (N = 947)

	Not Receiving Public Assistance (N = 681)	Receiving Public Assistance (N = 266)
Item	*N*	*N*
Child's Overall Health	4.38	4.31
Parent's Knowledge About Child's Health	4.39	4.41
Health Care Child Receives	4.30	4.33
Health Care Family Receives	4.17	4.22
Child's Hygiene Habits	3.72	3.73
Child's Eating Habits	3.82	3.89
Parent's Knowledge of Nutrition	4.16	4.31
Family's Overall NSutrition	4.11	4.18

There was no statistically significant difference between the mean scores of each item for those receiving public assistance and those not receiving public assistance. The items in the Child and Family Health and Nutrition Index were scaled in order to obtain an overall score of health and nutrition. The overall scale score for these items for those Year 8 ECEAP Longitudinal Study participants not receiving public assistance was 4.13, and it was 4.17 for the Year 8 ECEAP Longitudinal Study participants receiving public assistance. These scores were slightly above "good" for both groups.

Children's Health. Parents were asked to indicate any health problems their child may have been experiencing. The types of problems that were examined were weight, height, vision, hearing, dental, allergy, nutrition, other medical, speech, behavior, handicap or disability, and other developmental problems. In addition, parents were asked if the health problem caused missed school time or the child to perform poorly in school. Of the 266 families that received public assistance, slightly over half (54 percent) indicated their child had a specific health problem or special need. Table 3.17 shows the number and percent of parents reporting current health problems for their child.

Table 3.17

Number and Percent of Parent Reported Health Problems for Year 8 ECEAP Longitudinal Study Participants (N = 947)

	Number & Percent of Total Reporting Problem (N = 947)		Number & Percent of Those Not Receiving Public Assistance Reporting Problem (N = 681)		Number & Percent of Those Receiving Public Assistance Reporting Problem (N = 266)	
Health Problem	*N*	*%*	*N*	*%*	*N*	*%*
Vision	132	14	95	14	37	14
Hearing	35	4	21	3	14	5
Dental	88	9	58	9	30	11
Allergy	122	13	80	12	42	16
Nutrition	21	2	14	2	7	3
Other Medical	103	11	70	10	33	2
Speech	38	4	28	4	10	4
Behavior	123	13	71	10	52	20
Handicap/Disability	23	2	14	2	9	3
Other Developmental	29	3	15	2	14	5

As can be seen from Table 3.17, the most prevalent types of health problems reported by parents were vision, behavior, allergy, and other medical problems. The least prevalent type of health problem reported by parents was nutrition. There was a statistically significant difference found for two of the health variables. Behavior problems and other developmental problems were statistically significant ($p < 0.05$); those parents who received public assistance reported more behavior problems or other developmental problems and this was not due to chance alone.

A count was conducted of the health problems parents reported their child experiencing. The range of the number of health problems was from 0 to 10 for the Year 8 ECEAP Longitudinal Study participants. For those not receiving public assistance (N = 681), 45 percent reported one or more health problems for their child. Of those who reported health problems, 17 percent report more than one health problem for their child. For those families who received public assistance (N = 266), 53 percent report one or more health problem for their child with 23 percent reporting more than one health problem.

Parents were also asked during the Parent Interview if their child had experienced a serious illness, major medical treatment, or an injury or accident during the past year. Overall, 12 percent of the children in the Study experienced one

or more of these conditions; 12 percent of Study participants who did not receive public assistance experienced such conditions and almost 14 percent of those who received public assistance reported similarly. Three percent of both those who did, as well as did not, receive public assistance reported their child had a serious illness. Three percent of those who did not receive public assistance and 5 percent of those who did receive public assistance experienced major medical treatment. Seven percent who did receive and 9 percent of those who did not receive public assistance had an accident or injury.

Medical Service Use. Parents were asked to provide information on the ways in which their child used medical services during the past year. Parents were asked to provide information on use of such medical services as physical exams, check-ups, immunizations, and treatment of illness or injury. Seventy-six percent of those children who lived in families not receiving public assistance were seen by a doctor during the past year; 82 percent of children in families receiving public assistance were seen by a doctor. Statistically significant differences ($p < 0.05$) emerged between those families receiving public assistance versus those not receiving public assistance on the use of medical services. Specifically, those who received public assistance took their child to be seen by a doctor more frequently than those who did not receive public assistance and this difference was not due to chance alone. Table 3.18 displays the number and percent of reasons children saw a doctor during the past year.

Table 3.18

Number and Percent of Reasons Children Saw a Doctor for Year 8 ECEAP Longitudinal Study Participants (N = 947)

	Not Receiving Public Assistance (N = 681)		Receiving Public Assistance (N = 266)	
Reason	*N*	*%*	*N*	*%*
Physical Exam	335	49	157	59
Illness	217	32	89	33
Injury	69	10	35	13
Immunization	95	14	40	15
Other Reason	59	9	30	11

Seeing a doctor for a physical exam was statistically significant ($p < 0.05$). More children in families who received public assistance were seen by a doctor for a physical exam than were children in families who did not receive public assistance.

Utilization of Dental Services. Parents were asked to indicate the types of dental services their child received during the past year. Response categories included teeth cleaning or check-up, fillings, and other types of dental services. Approximately three-fourths of Year 8 ECEAP Longitudinal Study children had

been seen by a dentist during the past year; 79 percent of those children who lived in families who did not receive public assistance were seen by a dentist in the past year, and 75 percent of those who lived in families who did receive public assistance visited a dentist during the past year. Table 3.19 reports the number and percent of the types of dental services used during the past year.

Table 3.19

Number and Percent of Year 8 ECEAP Longitudinal Study Participants Reporting Dental Service Use During the Past Year (N = 947)

	Number & Percent of Total Reporting Dental Service (N = 947)		Number & Percent of Those Not Receiving Public Assistance Reporting Dental Service (N = 681)		Number & Percent of Those Receiving Public Assistance Reporting Dental Service (N = 266)	
Dental Service	*N*	*%*	*N*	*%*	*N*	*%*
Teeth Cleaning	695	73	505	74	190	71
Fillings	222	23	171	25	51	19
Fluoride Treatments	41	4	28	4	13	5
Extractions	27	3	18	3	9	3
Sealants	11	1	8	1	3	1
Other	62	7	39	6	23	9

The most utilized dental service was teeth cleaning. Sealants were used the least, and this may be due to the children being beyond an age when sealants would be applied. There was a statistically significant difference ($p < 0.05$) found for fillings. Those parents who received public assistance reported seeking dental services for fillings less than those parents who did not receive public assistance and this was not due to chance alone. Parents who receive public assistance may not have dental insurance coverage for fillings, and this may account for the difference between the two groups.

Health Insurance Coverage. Parents were asked to indicate if their child was covered by health insurance, as well as what kind of health insurance was utilized by the family to cover the child. Ninety percent of the children in the ECEAP Longitudinal Study were covered by some form of health insurance during 1995-1996. For those children living in families who did not receive public assistance, 87 percent were covered by health insurance; 97 percent of the children living in families receiving public assistance were covered by health insurance. This difference in health insurance coverage between the two groups was statistically significant ($p < 0.05$) and was not due to chance alone. Families receiving public assistance had a greater incidence of being covered by health insurance than families not receiving public assistance.

Table 3.20 details the number and percent of children covered by the various types of health insurance.

Table 3.20

Number and Percent of Children Covered by Health Insurance for Year 8 ECEAP Longitudinal Study Participants (N = 947)

	Number & Percent of Total Reporting Type of Insurance (N = 947)		Number & Percent of Those Not Receiving Public Assistance Reporting Type of Insurance (N = 681)		Number & Percent of Those Receiving Public Assistance Reporting Type of Insurance (N = 266)	
Type of Insurance	*N*	*%*	*N*	*%*	*N*	*%*
Employer Paid	283	30	276	41	7	3
Medicaid/Coupons	403	43	176	26	227	85
Medicare	3	<1	1	<1	2	1
Basic Health Plan	68	7	59	9	9	3
Family Paid	32	3	32	5	0	0
Combination Employee/Employer Paid	14	1	12	2	2	1
Indian Health Service	8	1	7	1	1	<1
Other	25	3	21	3	4	2

The most prevalent type of insurance coverage for the entire group was Medicaid/coupons and employer paid health insurance coverage. The least used type of health insurance coverage was Medicare and is no doubt due to the age of the population under study. There was a statistically significant ($p < 0.05$) difference found for four of the types of health insurance coverage: employer paid, Medicaid/coupons, Basic Health Plan, and family paid. Those families who did not receive public assistance reported more employer paid, Basic Health Plan, and family paid health coverage than those receiving public assistance. Those who did receive public assistance reported more Medicaid/coupon coverage than those who did not receive public assistance.

Parental Well-Being. Parents were asked to rate aspects of their well-being on an eleven-item index. Areas that were rated were time to be with their child, time for the family to be together, time for self, ability to control their future, feeling depressed, understanding of their child's needs, and the like. The response categories ranged from one (never) to five (quite often). Table 3.21 displays the mean score for each of the items in the index.

Table 3.21

Mean Scores for Parent Self-Report of Personal Well-Being for Year 8 ECEAP Longitudinal Study Participants (N = 947)

	Not Receiving Public Assistance (N = 681)	Receiving Public Assistance (N = 266)
Item	*Mean Score*	*Mean Score*
Time to be With Child	4.20	4.12
Family Had Time to be Together	4.11	4.16
Time to be by Self When Needed	3.06	2.74
Time to be With Friends	2.92	2.76
Life is Going Great	3.56	3.10
Feeling Blue or Depressed	2.20	2.62
Feeling in Control of Own Future	3.73	3.49
Feeling Trapped by Responsibilities	1.80	2.02
Don't Understand Child's Needs	2.17	2.29
Don't Have Skills to Help Child	2.04	2.18
Control Over Child's Education	3.77	3.90

Items from this index were scaled to give two global ratings of parental well-being. Seven of the items are considered to be positively oriented and the remaining four are negatively oriented. These items were scaled in order to obtain a global rating of the negative and positive aspects of well-being. Table 3.22 shows the means scores for both the positive and negative oriented items of the index.

Table 3.22

Mean Scale Scores for Parent Self-Report of Personal Well-Being for Year 8 ECEAP Longitudinal Study Participants (N = 947)

	Not Receiving Public Assistance (N = 681)	Receiving Public Assistance (N = 266)
Scale Orientation	*Mean Score*	*Mean Score*
Positive Scaled Items	3.61	3.47
Negative Scaled Items	2.04	2.27

The positive scaled items global score is near the midpoint between "sometimes" and "often." The negative scaled items global score is considered to be "once in a while." In other words, for any of the positive items, such as feeling in control of the future, participants averaged a score between "sometimes" and "often." Likewise, for a negative item, such as feeling blue or depressed, participants averaged a score of "once in a while." The differences in both the positive and negative scale score were statistically significant ($p < 0.05$); families who received public assistance had lower positive mean scores and higher negative mean scores, and this was not due to chance alone.

Educational Progress

Parents and teachers were asked to rate the educational progress of the ECEAP Longitudinal Study children. Several individual variables and instruments were used to assess children's educational progress to include adjustment to and enjoyment of school, referrals to special school services, parental participation in school activities, educational expectations, and the like. These indicators will be analyzed and reported on below.

Enjoyment of School. Parents were asked to assess the level of their child's enjoyment of school. The level of enjoyment was reported using a four-point scale of "a lot," "a little," "very little", and "can't tell" how much the child is enjoying school. The mean score for children in families not receiving public assistance was 3.62; the mean score for those children in families who did receive public assistance was 3.58. These scores are slightly below "a lot" of enjoyment of school. No statistically significant differences were found between the mean scores of school enjoyment for those who did and did not receive public assistance.

Adjustment to School. Parents were asked to indicate the level of their child's adjustment to school. A three-point scale was used to assess this variable. The scale consisted of "no problems," "some problems," and "many problems." The means score for children in families not receiving public assistance was 2.65; the mean score for children in families who did receive public assistance was 2.52. These scores are between "some problems" and "no problems" with adjustment to school. A statistically significant difference ($p < 0.05$) was found between the mean scores of school adjustment for those who did and did not receive public assistance. Those children who lived in families not receiving public assistance had higher adjustment to school mean scores than those children in families who did receive public assistance, and this was not due to chance alone.

Parental Reports of Children's Academic Progress. Parents were asked to rate their perception of their child's academic progress in school compared to their perception of other similarly aged children. A five-point scale was used of "well above average," "above average," "average," "somewhat below average," and "well below average." Items on this index included overall academic progress, motivation to do well, maturity, confidence, self-esteem, and behavior. The mean scores for each item are reported in Table 3.23.

Table 3.23

Mean Scores for Parental Perceptions of Academic Progress Items for Year 8 ECEAP Longitudinal Study Participants (N = 947)

	Not Receiving Public Assistance (N = 681)	Receiving Public Assistance (N = 266)
Item	*Mean Score*	*Mean Score*
Academic Progress	3.48	3.34
Language Progress	3.52	3.39
Reading Progress	3.45	3.29
Math Progress	3.50	3.23
Motivation	3.62	3.50
Sociable	3.88	3.88
Mature	3.55	3.52
Well-Behaved	3.59	3.41
Confident	3.34	3.34
Self-Esteem	3.39	3.32
Motor Skills	3.72	3.78

All items from the Academic Progress Index were scaled to give a global rating of academic progress. The global academic progress scale score for children living in families that did not receive public assistance was 3.54 and for those children living in families who did receive public assistance was 3.46. This is approximately halfway between average and above average for both groups. There was no statistically significant difference between the mean scores of the two groups.

Teacher Reports of Children's Academic Progress. Teachers were asked to report their assessment of the Study children's mid-year progress on six dimensions. Three of the six dimensions corresponded to the areas parents were asked to rate and were: language, reading, and math progress. The remaining three dimensions teachers assessed were homework assignments, in class assignments, and participation in classroom activities. A five-point scale was used and consisted of "well below average", "somewhat below average", "average", "somewhat above average", and "well above average." The mean scores of each item are reported in Table 3.24 below.

Table 3.24

Mean Scores for Teacher Assessment of Mid-Year Progress Items for Year 8 ECEAP Longitudinal Study Participants (N = 997)[12]

Item	Not Receiving Public Assistance (N = 751)	Receiving Public Assistance (N = 246)
	Mean Score	*Mean Score*
Language Progress	3.01	2.76
Reading Progress	3.06	2.79
Math Progress	3.09	2.75
Homework Assignments	2.98	2.79
In Class Assignments	3.12	2.83
Participation in Classroom Activities	3.21	3.06

Items from the Mid-Year Progress Report were scaled to give a global rating of academic progress. The global mid-year progress scale score for those children in families not receiving public assistance was 3.09 and is "average;" the mid-year progress scale score for children in families receiving public assistance was 2.83 and is nearly "average." A statistically significant difference ($p < 0.05$) was found between the mid-year progress scale mean scores for those who did and did not receive public assistance. Those children who lived in families not receiving public assistance had higher mid-year progress scale scores than those children in families who did receive public assistance, and this was not due to chance alone.

Teachers were also asked to rate the child's academic progress in school compared to other similarly aged children. These items were similar to those that parents were asked to complete during the parent interview. A five-point scale was used of "well above average," "above average," "average," "somewhat below average," and "well below average." Items contained in this index included overall academic progress, motivation to do well, maturity, confidence, self-esteem, and behavior. The mean scores reported by teachers for each item are reported in Table 3.25 below.

[12] Data collected from teachers on ECEAP Study participants is independent of the Parent Interview. Therefore, the number of participants with valid teacher-supplied data is different from the number with valid Parent Interview data.

Table 3.25

Mean Scores for Teacher Assessment of Academic Progress Items for Year 8 ECEAP Longitudinal Study Participants (N = 1003)[13]

	Not Receiving Public Assistance (N = 752)	Receiving Public Assistance (N = 251)
Item	*Mean Score*	*Mean Score*
Academic Progress	3.02	2.74
Self-Direction	2.97	2.72
Motivation	3.11	2.89
Stays on Task	3.08	2.84
Sociable	3.36	3.30
Mature	3.13	3.08
Well-Behaved	3.47	3.20
Confident	3.06	2.97
Self-Esteem	3.07	2.89
Motor Skills	3.44	3.42

All items from the teacher-reported Academic Progress Index were scaled to give a global rating of academic progress. The global academic progress scale score for children living in families not receiving public assistance was 3.19; the global academic progress scale score for children living in families receiving public assistance was 3.02. These scores are slightly above "average" for both groups. A statistically significant difference ($p < 0.05$) was found between the academic progress scale mean scores for those who did and did not receive public assistance. Those children who lived in families not receiving public assistance had higher academic progress scale scores than those children in families who did receive public assistance, and this was not due to chance alone.

School Changes During Past Year. Changing schools during the school year is often disruptive to children's educational progress. In order to determine if the child had changed schools during the past year, parents were asked during the Parent Interview if such a move had occurred, and if so, how many times. Approximately 11 percent of the Study participants (N = 103) had changed schools during the past year; 64 of the participants

[13] Data collected from teachers on ECEAP Study participants is independent of the Parent Interview. Therefore, the number of participants with valid teacher-supplied data is different from the number with valid Parent Interview data. In addition, teacher data is collected on three separate forms which also produces variability in the number of participants with valid teacher-supplied data on any of the three data collection forms.

who changed schools were from families who did not receive public assistance and 39 were from families who did receive public assistance. A statistically significant difference ($p < 0.05$) was found between the two groups on this variable. Children from families who did receive public assistance had a higher than expected number of school changes during the past year. The majority of those who changed schools changed only once during the past year.

CHAPTER 4

SUMMARY AND CONCLUSION

Conclusion

It appears that the ECEAP Longitudinal Study participant families who received ECEAP services have made strides in moving off of public assistance and finding employment as a means of supporting themselves. Moving off of public assistance indicates a greater degree of family self-sufficiency and stability than was present at Study enrollment.

The findings of the ECEAP Longitudinal Study through Year 8 show strong indication that the ECEAP program is successful in achieving the overall goal it set out in 1988 of bringing about a greater degree of educational and social proficiency in children from low-income families as well as greater family self-sufficiency. **The most notable shifts from enrollment to Year 8 were the decrease in public assistance as an income source and the increase of wages.**

The three cohorts of Study participants were between ten and twelve years old during Year 8 of the Study (1995-96). The following discussion will center on what has been learned to that point regarding the ECEAP participant children and families in the ECEAP Longitudinal Study.

Findings

There was a shift in poverty status since enrollment in the ECEAP Longitudinal Study. Forty-two percent fewer ECEAP group participants were at or below the poverty level during Year 8 than at the time of enrollment; 14 percent fewer Comparison group participants were at or below the poverty level during Year 8. The ECEAP group members have historically had a larger percent of members at or below poverty level since this group has historically had a lower annual income than the Comparison group members. The ECEAP group members have had lower annual incomes than the Comparison group members ever since the Comparison group entered the Longitudinal Study in Year 4. Among all Study participants (ECEAP and Comparison) at or below poverty level, ECEAP group members have had the lowest incomes. Therefore, even with such a large shift in poverty status for the ECEAP group members, it is not surprising to find a greater percent of the ECEAP group participants at or below the poverty level than Comparison group members.

From Study enrollment to Year 8, there was an increase in Study participants with multiple income sources. Most of the ECEAP group members and approximately two-thirds of the Comparison group members had at least one income source at Study enrollment. Nearly half of the ECEAP group members had two or more income sources during Year 8. Over one-third of the Comparison group members had multiple sources of income during Year 8.

The number of ECEAP families at or below the poverty level and receiving public assistance was fewer in Year 8 than at the time of enrollment. **At enrollment, two-thirds of the ECEAP group participants who were at or**

below the poverty level were receiving public assistance; at Year 8, there were just over one-half in that category. Interestingly, during Year 8, 5 percent of the Study participants who were above the poverty level also received public assistance as a source of income.

The two largest income categories at enrollment and Year 8 were wages and public assistance. During both time periods the least utilized income category was pensions, since most of the families in the ECEAP Longitudinal Study are not of an age where retirement and pension income would be accessible. As previously stated, **the most notable shifts from enrollment to Year 8 were the decrease in public assistance as an income source and the increase of wages.** There are 17 percent more Study participants reporting wages as an income source, and 14 percent fewer reporting public assistance as a source of income. Nineteen percent of the participants who received public assistance and were at or below the poverty level at enrollment also had additional sources of income. **This increased to 53 percent of the Study participants at Year 8 and reflects a 34 percent shift from enrollment to Year 8 in the percent of Study participants with additional sources of income other than public assistance.**

There was an increase from enrollment to Year 8 in the number of ECEAP Study children living with their mother and stepfather and receiving public assistance. Those children living with mother only, father only, grandparents, or other relatives represented the highest percentage of Study participants living in households where public assistance was an income source. Approximately half of all the children living in these situations during Year 8 lived in a household that received public assistance as a source of income. The children living in a household where there were two adults present (both parents or parent and step-parent) represented the lowest percentage of Study participants living in situations where public assistance was an income source.

Three-fourths of the ECEAP Study children whose families received public assistance as an income source had mothers whose highest education level completed was some high school or a high school diploma. The remaining one-fourth of the ECEAP Study children who received public assistance had mothers who had graduated from trade school or community college, received a baccalaureate degree, or had some other type of education. Similar findings exist for fathers' education level. Slightly less than three-fourths of the ECEAP Study children whose families received public assistance had a father with less than a high school education or had completed a high school diploma or GED. Slightly more than one-fourth of the ECEAP Study children who received public assistance had fathers who graduated from trade school, community college, or a four-year college, or had some other type of educational background.

There was a 20 percent increase during Year 8 in the number of children living with mothers or fathers who received public assistance and worked

full- or part-time. There was also an increase during Year 8 in the children living in families who received public assistance and the mother or father was unemployed. Additionally, approximately 90 percent of parents who did not receive public assistance worked full-time.

The ECEAP Longitudinal Study will continue to follow the children and families through high school graduation or the equivalent.

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GLOSSARY

Measures of Central Tendency: The average level of scores in a distribution. The three most frequently reported measures of central tendencies are the mean, median, and mode.

Mean: The sum of individual scores divided by the number of individuals.

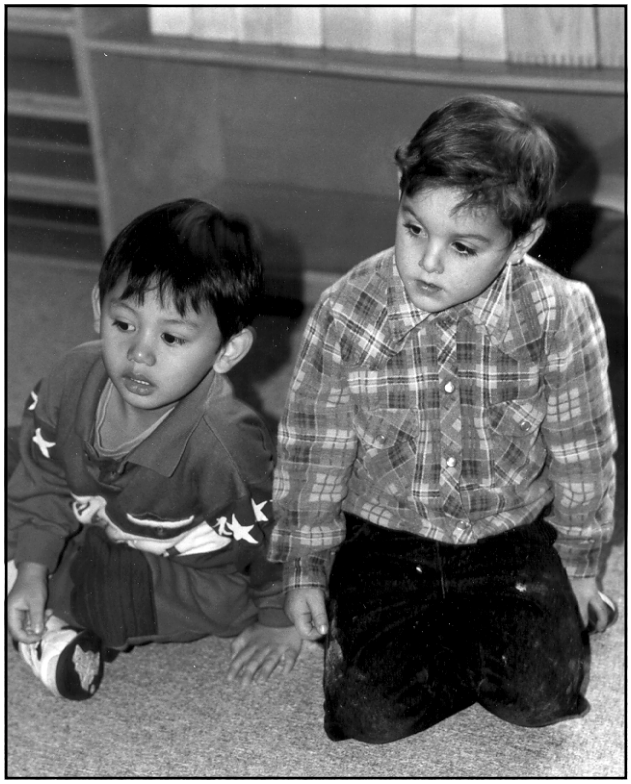
Median: The point on a scale above which and below which 50 percent of the cases fall.

Mode: The score that occurs with the greatest frequency.

N: An expression used to identify the size of the sample under investigation.

Statistical Tests of Significance: Various statistical techniques which tell us the likelihood that the study samples might have differed as much as they do by chance even if there were no differences.

$p < .05$: The probability that an obtained difference between different samples could occur by chance only 5 times in 100 trials.



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